UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte EDWARD M. GOLDSMITH
and
JAMES L. EASTON

Appeal No. 2005-1250
Application No. 09/929,299

ON BRIEF[1]

Before PATE, NASE, and BAHR, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2 and 17 to 30, which are all of the claims pending in this application.

We REVERSE.

[1] On July 13, 2005, the appellants waived the oral hearing scheduled for August 10, 2005.

BACKGROUND

The appellants' invention relates to hockey sticks and the blades thereof (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Christian et al. (Christian)	5,496,027	March 5, 1996
Meumann et al. (Meumann)	5,607,154	March 4, 1997
Malmberg[2]	169 928 (Sweden)	Oct. 8, 1959

Claims 1, 2, 17 to 21 and 23 to 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Malmberg in view of Meumann.

Claims 1, 2, 17 to 21 and 23 to 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Meumann in view of Malmberg.

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[2] In determining the teachings of Malmberg, we will rely on the translation of record provided by the appellants.

Claims 22 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Malmberg in view of Christian.

Claims 22 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Christian in view of Malmberg.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (mailed February 20, 2003) and the answer (mailed February 10, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (filed November 21, 2003) and reply brief (filed April 12, 2004) for the appellants' arguments thereagainst.[3]

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the

[3] The rejection of claims 1 and 2 under 35 U.S.C. § 102(b) made in the final rejection was withdrawn by the examiner in the answer (p. 2).

examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1, 2 and 17 to 30 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Meumann's invention relates generally to a hockey stick blade replacement system and method for connecting replaceable blades onto hockey stick shafts. As shown in Figure 1, the hockey stick replacement system 10 comprises a coupler portion 12 configured to fit between a replacement blade 14 and a hockey stick shaft 16. As shown in Figure 2, the coupler portion 12 preferably has a rectangular housing and may be made of any material such as metal, fiberglass, plastic or a composite thereof, such metals including but not limited to aluminum, magnesium, titanium, stainless steel and

high temperature alloys. The coupler portion 12 is at least partially hollow and functions as a linking mechanism for the hockey stick shaft 16 and the replacement blade 14. In one embodiment, the coupler portion 12 has openings 22 and 24 at opposing ends to receive the hockey stick shaft 16 and the hockey stick blade 14, respectively. Where desired, the two opposing ends 22, 24 may have different cross-sectional dimensions in order to accommodate a shaft and a blade hozel (top portion of the blade) of different dimensions, as shown in Figure 3. The dimensions of ends 22 and 24 may be equal for replacement blades having hozel dimensions equal to those of a hockey stick shaft. Preferably, in either case, the dimensions of the openings 22, 24 are sized to be just slightly larger than the respective dimensions of a hockey stick shaft and a replacement blade hozel in order to permit a tight fit. The stick shaft and replacement blade may be affixed to the coupler portion 12 via an adhesive to keep the components from separating in a linear direction. Other means for joining those components to the coupler portion include mechanical fasteners, or a press fit process whereby the coupler is heated, to expand the openings to fit over the shaft and replacement blade, and is then cooled to shrink fit about both components, although this latter process may not work as well for non-metals. A tight fit enhances the ability of the coupler to prevent the components from separating due to flexure of the entire stick.

Christian's invention relates generally to the field of hockey sticks and the like, and more particularly to a reinforced replacement blade for an ice hockey stick and method of making the same. As illustrated in Figures 1, 2, and 6, the hockey stick 1 includes an elongated handle 12 having a lower end 13, and an upper end (or free end) 11. The handle 12 is preferably hollow throughout its entire length. In another embodiment, at least a portion of the handle 12 could be filled with a lightweight foam or other material to provide desired flex or stiffness characteristics to the handle. In any event, at least the lower end 13 of the handle 12 is hollow so that the connection end 15 of a replacement blade 30 may be inserted therein. The replacement blade 30 includes a blade portion 18, a shaft portion 14, and a connection end 15. The connection end 15 has an exterior configuration and exterior dimensions approximating the interior configuration and dimensions of the hollow lower end 13 of the handle 12. The replacement blade 30 is reinforced by a layer of reinforcing material 21, which in the preferred embodiment is a braided tubular sleeve and a curable resin.

Malmberg's invention relates to a hockey stick. As shown in Figures 1-3, the hockey stick consists of a shaft 1 and a blade 2. The shaft 1 is provided with a decreasing width towards its bottom end. The shaft thus becomes relatively weakly dimensioned in the vicinity of the transition to the blade 2. This relatively weakly dimensioned part of the shaft is identified by reference character 3. Malmberg's

invention provides a reinforcement device 4 surrounding the weakly dimensioned part 3 to stiffen the shaft 1 when the weakly dimensioned part 3 has been deflected a small amount for the purpose of shock-absorbing spring action. As shown in Figure 3, the weakly dimensioned part 3 can be accomplished through the removal of concave regions 5 of material.

The appellants argue that the applied prior art does not suggest the claimed subject matter. We agree.

Independent claims 1 and 2 recite that an upper portion of a detachable hockey stick blade has a defined region of reduced longitudinal bending stiffness in a direction generally perpendicular to the faces of the blade when measured relative to regions in the upper portion that border either side of the defined region along the longitudinal axis. Independent claims 23 and 24 recite that an upper portion of a detachable hockey stick blade has an outer most exterior concave surface having a continuous curved transition into at least one of the first or second outer most exterior surfaces, wherein the concave surface forms a region of reduced width dimension, as measured between the first and second outer most exterior surfaces, relative to bordering regions on either side of the concave surface along the longitudinal axis. However, these limitations are not suggested by the applied prior art. In that regard, while Malmberg does teach a

weakly dimensioned part 3 provided in the bottom end of the shaft 1, Malmberg does not teach or suggest providing the upper portion of a detachable hockey stick blade (such as taught by either Meumann or Christian) with a weakly dimensioned part.

In our view, the only suggestion for modifying the applied prior art to meet the above-noted limitations stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It follows that we cannot sustain the examiner's rejections of independent claims 1, 2, 23 and 24 and claims 17 to 22 and 25 to 30 depending thereon.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 2 and 17 to 30 under 35 U.S.C. § 103 is reversed.

REVERSED

WILLIAM F. PATE III)
Administrative Patent Judge)
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) BOARD OF PATENT
) APPEALS
) AND
) INTERFERENCES
JEFFREY V. NASE)
Administrative Patent Judge)

JUDGE BAHR, dissenting:

I cannot join with my colleagues in reversing the examiner's rejections of claims 1, 2 and 17-30. Simply stated, while my colleagues find no suggestion in either the combination of Malmberg and Meumann or Malmberg and Christian to provide the upper (or shaft) portion of a detachable hockey stick blade with a weakly dimensioned part (i.e., a defined region of reduced longitudinal bending stiffness when measured relative to regions in the upper portion that border either side of the defined region), I agree with the examiner that either of these combinations is suggestive of such a detachable blade, as well as a hockey stick comprising a shaft and such detachable blade.

Malmberg discloses providing a relatively weakly dimensioned part 3 on the shaft of a hockey stick at the "transition to the blade" to allow some degree of shock-absorbing spring action when the stick is used (translation, page 1). The relatively weakly dimensioned part is accomplished through the removal of concave regions 5 of material from the part 3 (translation, page 2). Malmberg also teaches that a disadvantage of a shaft provided with such weakly dimensioned part is that the shafts often break. To overcome this disadvantage while still providing the shock-absorbing spring action, Malmberg discloses attaching a reinforcement device 4 over the relatively weakly dimensioned part 3, the reinforcement device being arranged such that it

stiffens the shaft 1 when the part 3 has been deflected a small amount for the purpose of shock-absorbing spring action (translation, page 2).

Meumann discloses a blade replacement system for hockey sticks comprising a hockey stick shaft 16, a replacement blade 14 and a coupler 12 configured to fit between a replacement blade and the shaft which is useful in repairing damaged hockey sticks for reuse. Meumann (column 1, lines 24-26) points out that, "[i]n many cases, a hockey stick breaks at the hozel portion of the blade (the lower shaft portion immediately above the blade)." This is precisely the region in which Malmberg discloses forming a relatively weakly dimensioned part to allow a degree of shock-absorbing spring action. According to Meumann,

> [i]t is contemplated that when a wooden hockey stick breaks close to the hozel of the stick, that the shaft be cleanly cut just above the break to provide a "squared off" connecting end 42, as shown in phantom in FIG. 1. That shaft connecting end 42 may then be inserted into opening 22 of coupler portion 12 as shown to snugly fit therewithin. While it is possible that the remaining broken blade may be refinished to create a hozel for insertion into opposing opening 24 of coupler portion 12, it is more likely that the user must discard the broken blade as unusable. Under those circumstances, the user can employ a replaceable blade contemplated by the present invention, said replaceable blade having a finished hozel 44, shown in phantom in FIG. 1 and directly in FIG. 6, that is capable of mating with opposing opening 24 for a snug fit therewithin [paragraph bridging columns 4 and 5].

In order to permit repair of a hockey stick shaft break in the hozel region in the manner discussed by Meumann, one of ordinary skill in the art would have been led to provide a replacement blade including a shaft portion extending from the blade portion to above the vulnerable hozel region, especially in light of the illustration in Figure 1 of a fairly substantial length of shaft portion on the replacement blade 14. Moreover, in order to obtain the shock-absorbing spring action discussed by Malmberg, it would have been obvious to provide such replacement blade 14 with a relatively weakly dimensioned part at the transition from the shaft portion to the blade, along with a reinforcement device or sleeve to stiffen and protect the shaft portion upon deflection of the weakly dimensioned part a small amount, as taught by Malmberg, so as to arrive at the subject matter of independent claims 1 and 2. With particular regard to claims 17, 23 and 24, which recite an "outer most exterior concave surface ...," the inclusion of an additional reinforcement device about the concave surface of the weakly dimensioned part is not excluded by these claims. Specifically, the transitional term "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements. See In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 802 (CCPA 1981).

For the foregoing reasons, I conclude that the combined teachings of Malmberg and Meumann would have been suggestive of the subject matter of independent claims 1, 2, 17, 23 and 24. Thus, I would affirm the rejection of these claims, as well as claims

18-21 and 25-29 which the appellants have not argued separately from these claims, as being unpatentable over either Malmberg in view of Meumann or Meumann in view of Malmberg.

Christian discloses a hockey stick comprising a handle 12 having a hollow lower end 13 and a replacement blade 30 having a connection end 15 at the upper end thereof for insertion into the hollow lower end 13 of the handle. The replacement blade 30 includes a blade portion 18, a shaft portion 14 and a connection end 15. The replacement blade 30 is reinforced by a layer of reinforcement material 21. The reinforcement material also covers the connection end 15 to provide added strength and durability to the otherwise vulnerable connection point between the handle and the replacement blade.

As discussed above, Malmberg evidences that it was well known in the art at the time of the appellants' invention to provide a relatively weakly dimensioned part on a hockey stick at the transition between the shaft and the blade to allow a degree of shock-absorbing spring action. Hence, it would have been obvious, to obtain the advantages of both the Christian hockey stick, comprising a shaft and reinforced replacement blade, and the shock-absorbing spring action discussed by Malmberg, to provide a hockey stick comprising a handle or shaft and a detachable replacement

blade including an upper shaft portion having a relatively weakly dimensioned part and a blade portion. In accordance with the teachings of Christian and Malmberg, it would have been apparent to one of ordinary skill in the art that the relatively weakly dimensioned part would be on the shaft portion of the replacement blade because this is where the shaft transitions to the blade. As such, like the examiner, I conclude that the combined teachings of Christian and Malmberg are fully suggestive of the subject matter of claims 22 and 30. Accordingly, unlike my colleagues, I would affirm the rejection of these claims as being unpatentable over either Malmberg in view of Christian or Christian in view of Malmberg.

JENNIFER D. BAHR
Administrative Patent Judge

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